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EXAMINER				
FINK, BRIEANN R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,506

Applicant(s)

MATSUMOTO ET AL.

Examiner

BRIANN R. FINK

Art Unit

4131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/16/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 6/16/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by *Yanagawa et al.* (US 5,041,511).

Yanagawa et al. discloses an ocular lens material, used for contact lenses (col. 1, ll. 1-4) consisting of a (meth)acrylic monomer, styrene monomer, other monomers, and a cross linking agent (col. 1, ll. 43-47). More specifically, a fluorine-containing (meth)acrylic monomer such as 2,2,2-trifluoroethyl (meth)acrylate (col. 3, ll. 42-52), a silicon-containing monomer such as tris(trimethylsiloxy)silylstyrene (col. 6, ll. 4-18), and crosslinking agents such as ethylene glycol di(meth)acrylate (col. 8, ll. 1-3) or 4-vinylbenzyl (meth)acrylate (col. 1, l. 61-col. 2, l. 2). The silicon-containing styrene is preferably within a range of from 30 to 90 parts by weight, and the fluorine-containing (meth)acrylate is preferably within a range of 10 to 70 parts by weight (col. 9, ll. 36-40). The amount of crosslinking agent is within a range of 0.5 to 15 parts by weight (col. 8, ll. 24-27). *Yanagawa et al.* also discloses that an ultraviolet absorber or colorant can be added to the lens material (col. 9, ll. 4-8). The resulting polymers have

oxygen permeability coefficients of at least $200 \cdot 10^{-11} \text{ (mL} \cdot \text{cm}^2 \text{)/(cm}^3 \cdot \text{sec} \cdot \text{mmHg)}$
(Examples 4-6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Yanagawa et al. (US 5,041,511), as applied to claims 7 and 8 above.

As noted, *Yanagawa et al.* anticipates claims 7 and 8, but fails to teach the amount of unpolymerized monomer content and the water absorption ratio of the copolymer.

The amount of unpolymerized monomer content is implied in the structure of the polymer, which is inherent in the structure of the copolymer taught by *Yanagawa et al.*

Yanagawa et al. teaches that the incorporation of monomers with hydrophilic groups, such as (meth)acrylic acid, improve the hydrophilicity of a contact lens or to obtain a water absorptive soft ocular lens material (col. 8, ll. 59-61). The omission of an element is obvious if the function of the element is not desired. See MPEP 2144.04 IIA.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have omitted the hydrophilic monomer, (meth)acrylic acid, in order to remove its function taught by *Yanagawa et al.*

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Yanagawa et al.* (US 5,041,511), as applied to claims 7 and 8 above, and further in view of *Mukoyama* (JP 08-304746).

As noted, *Yanagawa et al.* anticipates claims 7 and 8. *Yanagawa et al.* also teaches that the polymerization is conducted by gradually heating or raised stepwise within a temperature range of from room temperature to 130°C or through radiation of electromagnetic rays (col. 9, ll. 54-60); however *Yanagawa et al.* fails to teach the time period over which the polymerization is conducted.

Mukoyama teaches a contact lens material that is polymerized using a silicone-containing styrene monomer, a fluorine-containing (meth)acrylate, and a monomer for dimensional stability, such as the applicant's crosslinking agent ethylene glycol dimethacrylate ([0025], [0020], [0033]). *Mukoyama* further teaches the method of polymerizing the components through Working Example 1 where the mixture was irradiated at a temperature between 40 and 50°C for one hour to obtain a transparent copolymer.

It would have been obvious to one skilled in the art at the time of the invention to have polymerized the polymer composition of *Yanagawa et al.* as suggested by *Mukoyama* because it results in the same polymer composition at in a short amount of time.

6. Claim 1-4 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Yanagawa et al.* (US 5,041,511).

Yanagawa et al. discloses an ocular lens material, used for contact lenses (col. 1, ll. 1-4) consisting of a (meth)acrylic monomer, styrene monomer, other monomers, and a crosslinking agent (col. 1, ll. 43-47). More specifically, *Yanagawa et al.* teaches a copolymer of comprising a fluorine-containing alkyl (meth)acrylic monomer (col. 3, ll. 42-52), a silicon-containing styrene monomer (col. 6, ll. 4-18), and crosslinking agents (col. 8, ll. 1-28, and col. 1, l. 61-col. 2, l. 2). The silicon-containing styrene is preferably within a range of from 30 to 90 parts by weight, and the fluorine-containing (meth)acrylate is preferably within a range of 10 to 70 parts by weight (col. 9, ll. 36-40). The amount of crosslinking agent is within a range of 0.5 to 15 parts by weight (col. 8, ll. 24-27). *Yanagawa et al.* further discloses that an ultraviolet absorber or colorant can be added to the lens material (col. 9, ll. 4-8). The resulting polymers result in oxygen permeability coefficients of at least $200 \cdot 10^{-11} \text{ (mL} \cdot \text{cm}^2 \text{)/(cm}^3 \cdot \text{sec} \cdot \text{mmHg)}$ (Examples 4-6).

Yanagawa et al. fails to teach the amount of unpolymerized monomer content and the water absorption ratio of the copolymer.

The amount of unpolymerized monomer content is implied in the structure of the polymer, which is inherent in the structure of the copolymer taught by *Yanagawa et al.*

Yanagawa et al. teaches that the incorporation of monomers with hydrophilic groups, such as (meth)acrylic acid, improve the hydrophilicity of a

contact lens or to obtain a water absorptive soft ocular lens material (col. 8, ll. 59-61). The omission of an element is obvious if the function of the element is not desired. See MPEP 2144.04 IIA.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have omitted the hydrophilic monomer, (meth)acrylic acid, in order to remove its function taught by *Yanagawa et al.*

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Yanagawa et al.* (US 5,041,511), as applied above to claims 1-4 and 6, further in view of *Mukoyama* (JP 08-304746).

Yanagawa et al. renders claims 1-3 as obvious as noted above, but fails to teach the time period needed to complete polymerization.

Mukoyama teaches a contact lens material that is polymerized using a silicone-containing styrene monomer, a fluorine-containing (meth)acrylate, and a monomer for dimensional stability, such as the applicant's crosslinking agent ethylene glycol dimethacrylate ([0025], [0020], [0033]). *Mukoyama* further teaches the method of polymerizing the components through Working Example 1 where the mixture was irradiated at a temperature between 40 and 50°C for one hour to obtain a transparent copolymer.

It would have been obvious to one skilled in the art at the time of the invention to have polymerized the polymer composition of *Yanagawa et al.* as suggested by *Mukoyama* because it results in the same polymer composition at

in a short amount of time; hence, *Yanagawa et al.* in view of *Mukoyama* suggests such a product.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIEANN R. FINK whose telephone number is (571)270-7344. The examiner can normally be reached on Monday through Friday, 7:00 AM to 4:30 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner
Art Unit 4131

/B. R. F./
Examiner, Art Unit 4131

